

claims 32, 40, and 49, which generally correspond to original claims 9, 15, and 26, respectively, have also been rewritten to recite that the front and back panels on each side edge of the absorbent chassis are elastic. Support for this element appears throughout the specification, and in particular at page 15, lines 2-3. Accordingly claims 32-52 form the subject matter of the response. **A Version Of Claims With Markings To Show Changes Made** is submitted herewith as Appendix A.

Initially, in the Final Office Action dated September 18, 2002, the Examiner makes several objections to the specification. In particular, the Examiner states that "[t]he marked up copies of claim 26, section c) and the paragraph on page 23, line 15, line 1 thereof still do not comply with 37 CFR 1.121." As stated above, claim 26 has been canceled, thus obviating the need for correction. With respect to the paragraph on page 23, line 15, Applicants respectfully assert that any necessary corrections have been made. A clean version of replacement paragraphs to the specification is submitted herewith in Appendix E.

The Examiner also continues to object to the drawings. A substitute Fig. 4 has also been submitted (Appendix D) to reflect the amendments as suggested by the Examiner. Accordingly, Applicants respectfully assert that the Examiner's objection to the Figures has also been obviated.

The Examiner also repeats her objection to the use of trademarks in the specification. INSTRON and SINTECH have been amended in the specification to appear in all capitals as suggested by the Examiner. As a result, it is believed that the Examiner's objection to the use of trademarks has been obviated. A clean version of replacement paragraphs to the specification is submitted herewith in Appendix E.

The Examiner has also objected to the Disclosure because of several informalities. Initially, the Examiner objects to the Summary of the Invention asserting that the Summary of the Invention and the invention as claimed are not consistent in scope. Applicants direct the Examiner's attention to the substitute Summary of the Invention, included herewith (Appendices B & C). The Summary of the Invention has been amended to set forth the invention as recited in each of the independent claims. Applicants respectfully assert that because of these amendments, the substitute Summary of the Invention obviates the Examiner's objection. In particular, the first paragraph in the Summary, as amended, is substantially identical to independent claim 32. The second paragraph in the Summary, as amended, is substantially identical to independent claim 40. Finally, the third paragraph in the Summary, as amended, is substantially identical to independent claim 49. As a result, the subject matter recited in all of the independent claims is clearly set forth in the Summary. Since the independent claims have the broadest scope, Applicants respectfully

assert that it follows that the Summary of the Invention is commensurate in scope and consistent with the subject matter of the claims. Accordingly, the Examiner's objection to the Summary of the Invention has been obviated.

The Disclosure is further objected to because the Examiner believes that "on pages 22-25, Applicants disclose a number of methods but refer to Figure 4 which only shows one of the methods. The figure and the description should consistently describe one method and indicate the other methods as not shown." Applicants respectfully assert that the Disclosure, as amended (Appendices E & F), obviates the Examiner's instant objection. The Examiner is thanked for her suggestions in this regard.

The Abstract of the disclosure has also been amended. In particular, Applicants have amended the Abstract such that it is consistent in scope with the invention claimed. No new matter is added by this amendment, as the Abstract, as amended (Appendices G & H) is supported at least the following portions of the specification: Page 6, lines 3-9 and lines 32-34; Page 7, lines 14-16; Page 13, lines 29-32; Page 14, lines 1-5 and lines 9-18; and Page 15, lines 2-3.

The Examiner has also objected to the claims. The claims have been amended as suggested by the Examiner. Therefore, it is believed that all of the Examiner's objections have been obviated in view of the above amendments to the specification and to the claims.

#### **Rejections Under 35 U.S.C. § 112, Second Paragraph**

The claims, as amended, particularly point out and distinctly claim the subject matter of the invention.

By way of the Final Office Action mailed September 18, 2002, the Examiner rejected claims 9-19, 22-25 and 30-31 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. The presently presented claims in question (claims 32 and 40) have been rewritten as suggested by the Examiner to clarify that which is claimed. The Examiner is thanked for her assistance in this regard. Accordingly, Applicants believe the rejections under §112, Second Paragraph, have been obviated in view of the presently presented claims.

**Rejections Under 35 U.S.C. § 102(b)****Fernfors does not disclose each and every element of the claimed invention.**

By way of the Office Action mailed September 18, 2002, the Examiner rejected claims 9-13, 26-28, and 30 under 35 U.S.C. § 102 (b) as allegedly being anticipated and thus unpatentable over UK Patent No. GB 2,308,290, the application of which published June 25, 1997, to Fernfors (hereinafter "Fernfors"). As noted above, the claims in question have been rewritten in the present application, and generally correspond to claims 32-36, 49-51, and 38. As such, this rejection is respectfully **traversed** to the extent that it may apply to the presently presented claims 32-36, 49-51, and 38.

Fernfors describes a method of producing reclosable absorbent garments, and absorbent garments obtained by that method. In particular, Fernfors describes a single garment or a series of joined single garments that are produced in the closed state (See Page 3, lines 3-5).

Claims 32 and 49 of the present invention are directed in part to pant-like, prefastened, refastenable disposable absorbent articles that include, *inter alia*, an absorbent chassis and a pair of elastic opposed back panels that are permanently attached to the side edge of the absorbent chassis in the back waist region of the absorbent article. The absorbent article also includes a pair of elastic opposed front panels that are refastenably attached to the side edge of the absorbent chassis in the front waist region of the absorbent article to provide a refastenable joint.

In order to be anticipatory, a reference must describe each and every element of a claimed invention. Fernfors, however, does not disclose the pant-like, prefastened, refastenable disposable absorbent article of the present invention. That is, Fernfors fails to disclose a pant-like, prefastened, refastenable disposable absorbent article that includes a pair of elastic opposed back panels that are permanently attached to the side edge of the absorbent chassis in the back waist region of the absorbent article. Further, Fernfors also does not disclose a pair of elastic opposed front panels that are refastenably attached to the side edge of the absorbent chassis in the front waist region of the absorbent article. Instead, Fernfors, at Page 7, lines 6-8, describes an absorbent garment that includes a strip (8) that "should be preferably be of a soft, yet strong material..." but, "...that will generally not be elasticated." As such, Fernfors clearly does not disclose a pant-like, prefastened, refastenable disposable absorbent article of the present invention that includes elastic front and back panels. For at least these reasons, Applicants respectfully submit that claims 32 and 49 are patentable over Fernfors. Moreover, Applicants submit that claims 33-36, 38, 50 and 51, which depend from the above independent claims, are

also accordingly patentable over Fernfors. Therefore, Applicants respectfully request that the rejection under 35 U.S.C. §102(b) be withdrawn.

**Rejections Under 35 U.S.C. § 103(a)**

**McNichols is disqualified as prior art under 35 U.S.C. § 103.**

In the Final Office Action mailed September 18, 2002, the Examiner rejects claims 15-19, 22-25, and 29 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Fernfors in view of U.S. Patent No. 6,036,805 issued March 14, 2000 to McNichols (hereinafter "McNichols"). As noted above, the claims in question have been rewritten in the present application, and generally correspond to claims 40-48 and 52. As such, this rejection is respectfully **traversed** to the extent that it may apply to the presently presented claims 40-48 and 52. In particular, Applicants respectfully submit that the rejections are now improper in view of MPEP 706.02(I)(1).

MPEP 706.02(I)(1) is directed to "Rejections Under 35 U.S.C. 102(e)/103". The section states that "...subject matter which was prior art under former 35 U.S.C. 103 via 35 U.S.C. 102(e) is now disqualified as prior art against the claimed invention if that subject matter and the claimed invention 'were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.'" This section applies to all applications filed on or after November 29, 1999.

McNichols is prior art with respect to the present rejection under 35 U.S.C. 103(a) via 35 U.S.C. 102(e). Specifically, the present application was filed as a CPA on December 18, 2002 (that is, after November 29, 1999), claiming priority to the parent application filed December 18, 1998. McNichols was filed on June 19, 1998 and issued on March 14, 2000. This indicates that McNichols is prior art under 35 U.S.C. 103 via 35 U.S.C. 102(e).

However, McNichols is disqualified as prior art against the present application because both are assigned to Kimberly-Clark Worldwide, Inc. Specifically, assignment of the present application was recorded on December 18, 1998 at reel number 9666 and frame number 0023. Assignment of McNichols was recorded on June 19, 1998 at reel number 9296 and frame number 0485.

Based on MPEP 706.02(I)(1), Applicants respectfully submit that all the rejections under 35 U.S.C. 103(a) in view of McNichols should be withdrawn. Therefore, Applicants are not responding at this time to the substantive portion of the Examiner's rejections and based on the foregoing, respectfully request that these rejections under 35 U.S.C. §103(a) be withdrawn.

McNichols is disqualified as prior art under 35 U.S.C. § 103 and the combination of Fernfors and Sauer does not teach or suggest each and every element of the claimed invention.

By way of the Office Action mailed September 18, 2002, the Examiner also rejected claim 31 under 35 U.S.C. § 103(a) as allegedly being obvious to one of ordinary skill in the art at the time the invention was made and thus unpatentable over Fernfors in view of McNichols and U.S. Patent No. 5,624,428 issued April 29, 1997, to Sauer (hereinafter "Sauer"). As noted above, the claim in question has been rewritten in the present application, and generally corresponds to claim 39. The Examiner acknowledges that Fernfors does not disclose "panels of neck-bonded laminate" as required by claim 39. However, the Examiner believes that Fernfors "teaches panels of...elastic material." The Examiner also believes that Sauer teaches that "it is well known to form side panels of nonwoven or/and elastic neck-bonded laminate material." The Examiner believes, therefore, "[t]o make the side panels of neck-bonded laminate material on the SCA device would be obvious to one of ordinary skill in the art." Applicants disagree. Accordingly, this rejection is respectfully **traversed** to the extent that it may apply to the presently presented claim 39.

Initially, as set forth above, Applicants submit that McNichols is disqualified as prior art under 35 U.S.C. § 103. Moreover, with respect to the rejection based on Fernfors in view of Sauer, in order to establish a *prima facie* case of obviousness, three basic criteria must be met: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP §2143.

The disclosure of Fernfors is discussed above. Sauer is directed to an absorbent article having a pantlike pull down feature. In particular, at Column 8, lines 13-50, Sauer discloses that the article may include an expansion member (item 46 in the Figures of Sauer) that may be stretchable or elastic, and may be a Neck Bonded Laminate.

The rejected claim depends from claim 32. Claim 32 of the present invention is, as set forth above, directed in part to pant-like, prefastened, refastenable disposable absorbent articles that include, *inter alia*, an absorbent chassis and a pair of elastic opposed back panels that are permanently attached to the side edge of the absorbent chassis in the back waist region of the absorbent article. The absorbent article also includes a pair of elastic opposed front panels that are refastenably attached to the side edge of the absorbent chassis in the front waist region of the

absorbent article to provide a refastenable joint. Claim 39 further recites that the front and back panels are a neck-bonded laminate material.

Fernfors neither teaches nor suggests the pant-like, prefastened, refastenable disposable absorbent article of claim 39. That is, Fernfors does not teach or suggest an absorbent article including elastic front and back panels. Moreover, Fernfors does not teach or suggest an absorbent article that includes elastic front and back panels that are neck-bonded laminate material. Instead, Fernfors as set forth above, teaches away from such a configuration by describing an absorbent garment that includes a strip (8) that "should be preferably be of a soft, yet strong material..." but, "...that will generally not be elasticated." Therefore, Applicants respectfully assert that Fernfors does not render claim 39 obvious.

Moreover, due to the teaching of Fernfors, there is no motivation to combine Fernfors and Sauer to arrive at the present invention of claim 39. Nonetheless, for the sake of argument, the combination of Fernfors and Sauer fails to correct for the deficiencies of Fernfors alone. That is, the combination of Fernfors and Sauer fails to teach or suggest the pant-like, prefastened, refastenable, disposable absorbent articles as recited in the rejected claim. Fernfors does not teach a pair of elastic front and back panels that are a neck-bonded laminate material. In addition, Sauer does not teach or suggest an absorbent article having front and back panels of any kind. At best, the combination of Fernfors and Sauer teaches the pants-type diaper of Fernfors with the expansion member as taught by Sauer. Therefore, claim 31 is patentable under 35 U.S.C. § 103 over Fernfors in view of Sauer.

#### **Provisional Rejection Under the Doctrine of Nonstatutory Double Patenting**

In the Final Office Action mailed September 18, 2002, the Examiner provisionally rejects claims 9-11, 14-15, 19, 22, 26-27 and 29 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 14-16 and 21-22 of copending Application No. 09/706,294. Submitted herewith is a terminal disclaimer indicating common ownership of the inventions and limiting the term of any patent that may issue based on the present application to the term of any patent that may arise from copending Application No. 09/706,294. As such, Applicants respectfully request that the Examiner withdraw the rejection.


In view of the above amendments and remarks, reexamination, reconsideration and withdrawal of the rejections of presently presented claims 32-52 is respectfully requested. Moreover, it is respectfully submitted that all of the presently presented claims are in form for allowance and such action is earnestly solicited.

Please charge any prosecutorial fees which are due to Kimberly-Clark Worldwide, Inc. deposit account number 11-0875. The undersigned may be reached at: (920) 721-3862.

Respectfully submitted,

THOMAS H. ROESSLER ET AL.

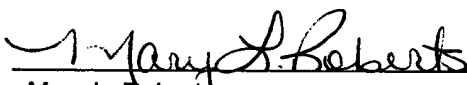
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CERTIFICATE OF EXPRESS MAILING

I, Mary L. Roberts, hereby certify that on December 18, 2002 this document is being deposited with the United States Postal Service postage prepaid as Express Mail No. ET791925311US, in an envelope addressed to: Box CPA, Assistant Commissioner for Patents, Washington, D.C. 20231.

By: \_\_\_\_\_

  
Mary L. Roberts

# APPENDIX A



**Version Of Claims With Markings To Show Changes Made**

Please **CANCEL** claims 9-19, and 22-31 without prejudice.

32. (New) A pant-like, prefastened, refastenable, disposable absorbent article which defines a front waist region, a back waist region, a crotch region which extends between and connects said waist regions, a longitudinal direction and a lateral direction, said absorbent article further comprising:

a) an absorbent chassis which defines an exterior surface, an interior surface opposite said exterior surface, a pair of laterally opposed side edges and a pair of longitudinally opposed waist edges;

b) a pair of opposed elastic back panels which are respectively permanently attached to said side edge of said absorbent chassis in said back waist region of said absorbent article; and

c) a pair of opposed elastic front panels which are respectively refastenably attached to said side edge of said absorbent chassis in said front waist region of said absorbent article to provide a refastenable joint wherein said front panel and said back panel on each side edge of said absorbent chassis are permanently connected together along a side seam to define a waist opening and a pair of leg openings and provide said pant-like, prefastened, refastenable, disposable absorbent article.

33. (New) The absorbent article of claim 32 wherein each of said side seams defines a lateral outboard edge of said article.

34. (New) The absorbent article of claim 32 and further comprising a fastener located on each of said front panels which is refastenably engaged with said exterior surface of said absorbent chassis in said front waist region to provide said refastenable joint.

35. (New) The absorbent article of claim 34 wherein said fasteners are hook and loop fasteners.

36. (New) The absorbent article of claim 34 and further comprising at least one attachment panel which is located on said exterior surface of said absorbent chassis wherein said fasteners are refastenably engaged to said attachment panel.

37. (New) The absorbent article of claim 34 wherein said absorbent chassis includes an outer cover which provides said exterior surface and wherein said fasteners are refastenably engaged directly to said outer cover.

38. (New) The absorbent article of claim 32 wherein said absorbent chassis comprises:

- a) an outer cover;
- b) a bodyside liner which is connected to said outer cover in a superposed relation; and
- c) an absorbent core disposed between said outer cover and said bodyside liner.

39. (New) The absorbent article of claim 32 wherein said front and back panels are a neck-bonded laminate material.

40. (New) A pant-like, prefastened, refastenable, disposable absorbent article which defines a front waist region, a back waist region, a crotch region which extends between and connects said waist regions, a longitudinal direction and a lateral direction, said absorbent article further comprising:

- a) an absorbent chassis which defines an exterior surface, an interior surface opposite said exterior surface, a pair of laterally opposed side edges and a pair of longitudinally opposed waist edges;

- b) a pair of opposed elastic back panels which are respectively permanently attached to said side edge of said absorbent chassis in said back waist region of said absorbent article;

- c) a pair of opposed elastic front panels which are respectively refastenably attached to said side edge of said absorbent chassis in said front waist region of said absorbent article to provide a refastenable joint wherein said front panel and said back panel on each side edge of said absorbent chassis are permanently connected together along a side seam to define a waist opening and a pair of leg openings and provide said pant-like, prefastened, refastenable, disposable absorbent article;

- d) a fastener located on each of said front panels which is releasably engaged with said exterior surface of said absorbent chassis in said front waist region to provide said refastenable joint; and

e) a releasable bond located on each of said front panels which releasably bonds said front panels to said side edges of said absorbent chassis in said front waist region to assist in maintaining said pant-like, prefastened, refastenable, disposable absorbent article in said prefastened condition.

41. (New) The absorbent article of claim 40 wherein said absorbent chassis comprises:

- a) an outer cover;
- b) a bodyside liner which is connected to said outer cover in a superposed relation; and
- c) an absorbent core disposed between said outer cover and said bodyside liner.

42. (New) The absorbent article of claim 40 wherein said fasteners are hook and loop fasteners.

43. (New) The absorbent article of claim 40 and further comprising at least one attachment panel which is located on said exterior surface of said absorbent chassis wherein said fasteners are refastenably engaged to said attachment panel.

44. (New) The absorbent article of claim 41 wherein said fasteners are refastenably engaged directly to said outer cover of said absorbent chassis.

45. (New) The absorbent article of claim 40 wherein each of said side seams defines a lateral outboard edge of said article.

46. (New) The absorbent article of claim 40 wherein said releasable bonds include at least one point bond.

47. (New) The absorbent article of claim 40 wherein said releasable bonds are ultrasonic bonds.

48. (New) The absorbent article of claim 40 wherein said releasable bonds define a peel strength of no more than about 1500 grams.

49. (New) A pant-like, prefastened, refastenable, disposable absorbent article which defines a front waist region, a back waist region, a crotch region which extends between and connects said waist regions, an absorbent chassis which defines a pair of opposed side edges and a pair of opposed waist edges, wherein said pant-like, disposable absorbent article is made by a process which comprises:

a) providing a continuous web of interconnected absorbent chassis;

b) permanently attaching a pair of laterally opposed elastic back panels to said side edges of each of said absorbent chassis in one of said front waist region or said back waist region to provide a permanent joint;

c) refastenably attaching a pair of laterally opposed elastic front panels to said side edges of each of said absorbent chassis in said opposite waist region of said absorbent article to provide a refastenable joint;

d) selectively cutting said continuous web of interconnected absorbent chassis into discrete absorbent articles;

e) folding each of said discrete absorbent articles about a fold line extending in a lateral direction through said crotch region of said article thereby positioning said front panels and said back panels in a facing relationship; and

f) permanently connecting said front panels and said back panels together along a pair of laterally opposed side seams to define a waist opening and a pair of leg openings and provide said pant-like, prefastened, refastenable, disposable absorbent article.

50. (New) The absorbent article of claim 49 wherein said refastenably attaching includes refastenably engaging a fastener located on each of said front panels to said exterior surface of each of said absorbent chassis in said front waist region to provide said refastenable joint.

51. (New) The absorbent article of claim 50 wherein said fasteners are hook and loop fasteners.

52. (New) The absorbent article of claim 50 wherein said refastenably attaching includes ultrasonically bonding said front panels to said side edges of said absorbent chassis in said front waist region to assist said fasteners in providing said refastenable joints.

# APPENDIX B

Clean Version of the Amended Summary of the Invention:Summary of The Invention

In response to the difficulties and problems discussed above, new pant-like disposable absorbent articles which have an easy opening feature and methods of making the same have been discovered. In one aspect, the present invention concerns a pant-like, prefastened, refastenable, disposable absorbent article which defines a front waist region, a back waist region, a crotch region which extends between and connects the waist regions, a longitudinal direction and a lateral direction. The absorbent article includes an absorbent chassis, a pair of opposed <sup>elastic</sup> back panels and a pair of opposed <sup>elastic</sup> front panels. The absorbent chassis defines an exterior surface, an interior surface opposite the exterior surface, a pair of laterally opposed side edges and a pair of longitudinally opposed waist edges. The opposed back panels are <sup>respectively</sup> permanently attached to the side edges of the absorbent chassis in the back waist region of the absorbent article. The opposed front panels are <sup>respectively</sup> refastenable attached to the side edges of the absorbent chassis in the front waist region of the absorbent article to provide a refastenable joint. The front panel and back panel on each side edge of the absorbent chassis extend laterally outward from the absorbent chassis and are permanently connected together along a side seam to define a waist opening and a pair of leg openings and provide the pant-like, prefastened, refastenable, disposable absorbent article.

In yet another aspect, the present invention concerns a pant-like, prefastened, refastenable, disposable absorbent article which defines a front waist region, a back waist region, a crotch region which extends between and connects the waist regions, a longitudinal direction and a lateral direction. The absorbent article includes an absorbent chassis which defines an exterior surface, an interior surface opposite the exterior surface, a pair of laterally opposed side edges and a pair of longitudinally opposed waist edges. The absorbent article also includes a pair of opposed back panels which are <sup>elastic</sup> <sup>respectively</sup> permanently attached to the side edges of the absorbent chassis in the back waist region of the absorbent article. The absorbent article also includes a pair of opposed <sup>elastic</sup> front panels which are <sup>respectively</sup> refastenable attached to the side edges of the absorbent chassis in the front waist region of the absorbent article to provide a refastenable joint. The front panel and the back panel on each side edge of the absorbent chassis are permanently connected together along a side seam to define a waist opening and a pair of leg openings and provide the pant-like,

prefastened, refastenably disposable absorbent article. The absorbent article also includes a fastener located on each of the front panels which are releasably engaged with the exterior surface of the absorbent chassis in the front waist region to provide the refastenable joint. The absorbent article finally includes a releasable bond located on each of the front panels which releasably bonds the front panels to the side edges of the absorbent chassis in the front waist region to assist in maintaining the pant-like, prefastened, disposable absorbent article in the prefastened condition.

In yet another aspect, the present invention concerns a pant-like, prefastened, refastenable, disposable absorbent article which defines a front waist region, a back waist region, a crotch region which extends between and connects the waist regions, an absorbent chassis which defines a pair of opposed side edges and a pair of opposed waist edges. The pant-like, disposable absorbent article is made by a process which includes:

- a) providing a continuous web of interconnected absorbent chassis;
- b) permanently attaching a pair of laterally opposed elastic back panels to the side edges of each of the absorbent chassis in the back waist region to provide a permanent joint;
- c) refastenably attaching a pair of laterally opposed elastic front panels to the side edges of each of the absorbent chassis in the front waist region of the absorbent article to provide a refastenable joint;
- d) selectively cutting the continuous web of interconnected absorbent chassis into discrete absorbent articles;
- e) folding each of the discrete absorbent articles about a fold line extending in a lateral direction through the crotch region of the article thereby positioning the front panels and the back panels in a facing relationship; and
- f) permanently connecting the front panels and the back panels together along a pair of laterally opposed side seams to define a waist opening and a pair of leg openings and provide the pant-like, prefastened, refastenable, disposable absorbent article.

The present invention advantageously provides pant-like, refastenable disposable absorbent articles which include an easy opening feature and methods of making the same. In particular, the present invention provides pant-like disposable absorbent articles which are capable of being



02 reliably pulled up or down over the hips of the wearer to assist in the toilet training of the wearer similar to conventional training pants. Moreover, similar to conventional diapers, the pant-like disposable absorbent articles of the present invention can advantageously be applied to and removed from the wearer similar to conventional diapers after they have been soiled with relative ease and cleanliness. Further, the pant-like disposable absorbent articles of the present invention allow easy inspection by the care giver to assist in determining whether the article is soiled similar to conventional diapers.

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# APPENDIX C

**Version Of Summary of the Invention. With Markings To Show Changes Made****Summary of the Invention**

In response to the difficulties and problems discussed above, new pant-like disposable absorbent articles which have an easy opening feature and methods of making the same have been discovered. In one aspect, the present invention concerns a pant-like, prefastened, refastenable, disposable absorbent article which defines a front waist region, a back waist region, a crotch region which extends between and connects the waist regions, a longitudinal direction and a lateral direction. The absorbent article includes an absorbent chassis, a pair of opposed elastic back panels and a pair of opposed elastic front panels. The absorbent chassis defines an exterior surface, an interior surface opposite the exterior surface, a pair of laterally opposed side edges and a pair of longitudinally opposed waist edges. The opposed back panels are respectively permanently attached to the side edge of the absorbent chassis in the back waist region of the absorbent article. The opposed front panels are respectively refastenably attached to the side edge of the absorbent chassis in the front waist region of the absorbent article to provide a refastenable joint. The front panel and back panel on each side edge of the absorbent chassis extend laterally outward from the absorbent chassis and are permanently connected together along a side seam to define a waist opening and a pair of leg openings and provide the pant-like, prefastened, refastenable, disposable absorbent article.

In yet another aspect, the present invention concerns a pant-like, prefastened, refastenable, disposable absorbent article which defines a front waist region, a back waist region, a crotch region which extends between and connects the waist regions, a longitudinal direction and a lateral direction. The absorbent article includes an absorbent chassis which defines an exterior surface, an interior surface opposite the exterior surface, a pair of laterally opposed side edges and a pair of longitudinally opposed waist edges. The absorbent article also includes a pair of opposed elastic back panels which are respectively permanently attached to the side edge of the absorbent chassis in the back waist region of the absorbent article. The absorbent article also includes a pair of opposed elastic front panels which are respectively refastenably attached to the side edge of the absorbent chassis in the front waist region of the absorbent article to provide a refastenable joint. The front panel and the back panel on each side edge of the absorbent chassis are permanently connected together along a side seam to define a waist opening and a pair of leg

openings and provide the pant-like, prefastened, refastenably disposable absorbent article. The absorbent article also includes a fastener located on each of the front panels which are releasably engaged with the exterior surface of the absorbent chassis in the front waist region to provide the [refastenably] refastenable joint. The absorbent article finally includes a releasable bond located on each of the front panels which releasably bonds the front panels to the side edges of the absorbent chassis in the front waist region to assist in maintaining the pant-like, prefastened, disposable absorbent article in the prefastened condition.

In yet another aspect, the present invention concerns a pant-like, prefastened, refastenable, disposable absorbent article which defines a front waist region, a back waist region, a crotch region which extends between and connects the waist regions, an absorbent chassis which defines a pair of opposed side edges and a pair of opposed waist edges. The pant-like, disposable absorbent article is made by a process which includes:

a) providing a continuous web of interconnected absorbent chassis;

b) permanently attaching a pair of laterally opposed elastic back panels to the side edges of each of the absorbent chassis in [one of the front waist region or ]the back waist region to provide a permanent joint;

c) refastenably attaching a pair of laterally opposed elastic front panels to the side edges of each of the absorbent chassis in the [opposite] front waist region of the absorbent article to provide a refastenable joint;

d) selectively cutting the continuous web of interconnected absorbent chassis into discrete absorbent articles;

e) folding each of the discrete absorbent articles about a fold line extending in a lateral direction through the crotch region of the article thereby positioning the front panels and the back panels in a facing relationship; and

3-28-03 f) permanently connecting the front panels and the back panels together along a pair of laterally opposed side seams to define a waist opening and a pair of leg openings and provide the pant-like, prefastened, refastenable, disposable absorbent article.

The present invention advantageously provides pant-like, refastenable disposable absorbent articles which include an easy opening feature and methods of making the same. In particular, the

present invention provides pant-like disposable absorbent articles which are capable of being reliably pulled up or down over the hips of the wearer to assist in the toilet training of the wearer similar to conventional training pants. Moreover, similar to conventional diapers, the pant-like disposable absorbent articles of the present invention can advantageously be applied to and removed from the wearer similar to conventional diapers after they have been soiled with relative ease and cleanliness. Further, the pant-like disposable absorbent articles of the present invention allow easy inspection by the care giver to assist in determining whether the article is soiled similar to conventional diapers.

## APPENDIX D

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## Figure 4 Red-lined

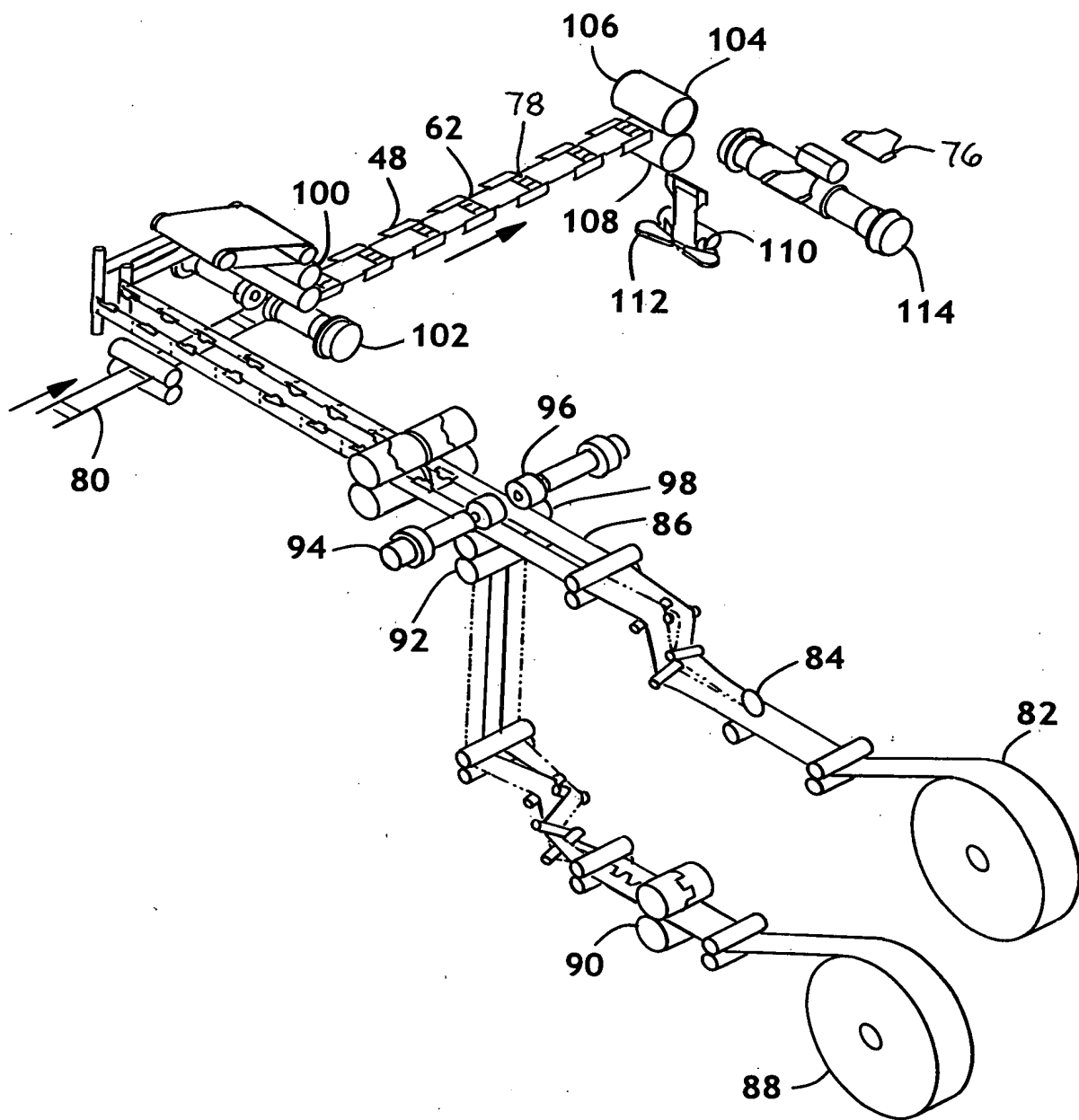


FIG. 4





## Figure 4 New w/ label

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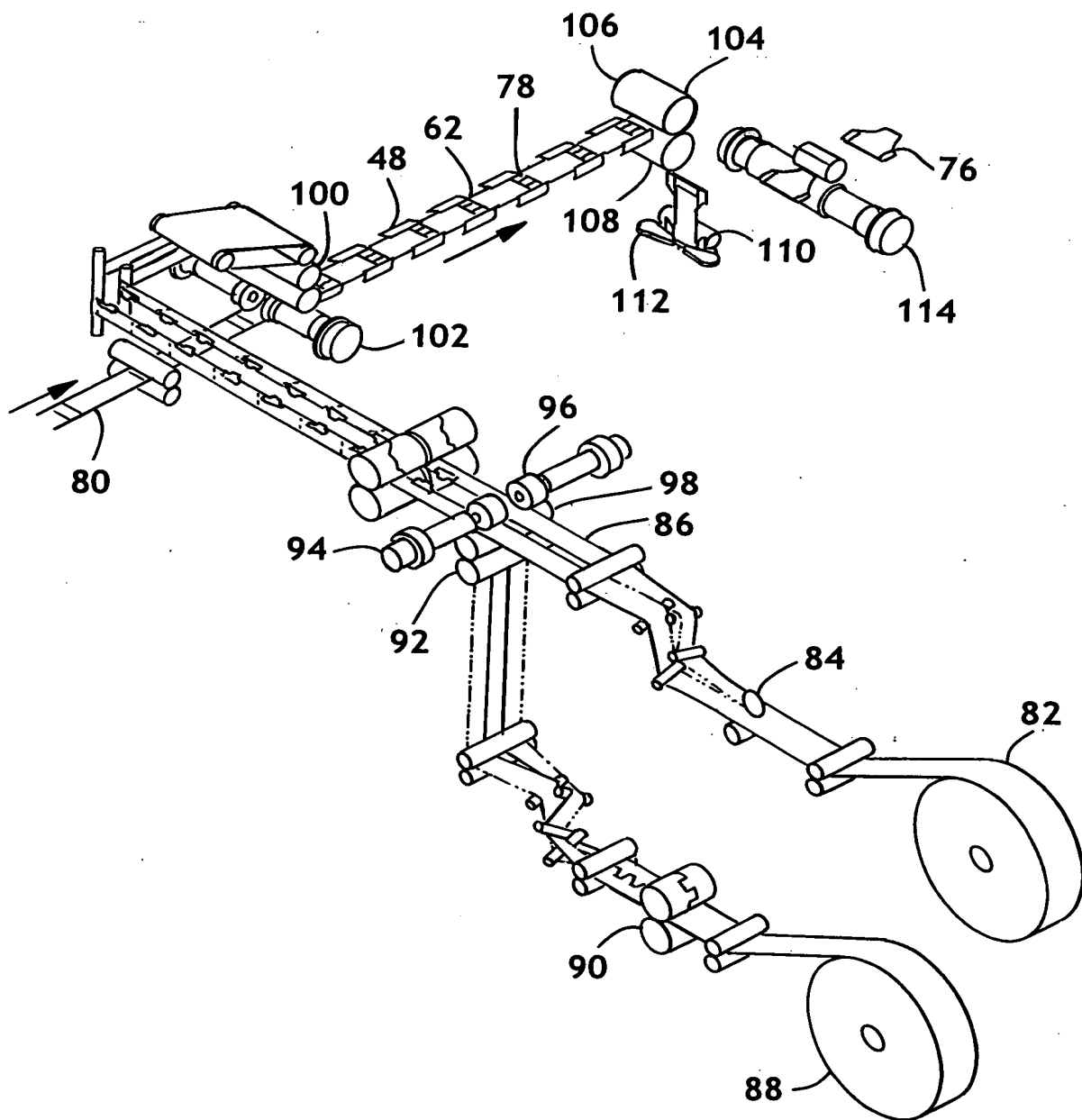
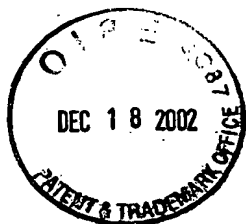


FIG. 4

# APPENDIX E

Clean Version of Replacement Paragraphs to Specification:

The paragraph on page 21 beginning at line 33, with changes at page 22, lines 8, and 12:

D<sub>4</sub> As illustrated in Fig. 4, a pair of laterally opposed side panels 48 having primary fasteners 62 attached thereto are also attached to the side edges of the continuously moving web of interconnected absorbent chassis 80. In such a configuration, the primary fasteners 62 may be refastenably engaged with the outer surface of the absorbent chassis 28 of each diaper. For example, as representatively illustrated in Figs. 1 and 2, the primary fasteners 62 located on the side margins 50 of each of the side panels 48 may be refastenably engaged with the outer surface 36 of the absorbent chassis 28 of the diaper 20 in the front waist region 22 of the diaper 20. Alternatively, the primary fasteners 62 located on the side margins 50 of each of the side panels 48 may be refastenably engaged with the outer surface 36 of the absorbent chassis 28 of the diaper 20 in the back waist region 24 (not shown). As discussed above, each diaper 20 may include an attachment panel 66 located on the outer cover 42 to which the primary fasteners 62 are refastenably engaged. Alternatively, the primary fasteners 62 may refastenably engage the outer cover 42 of the absorbent chassis 28 of the diaper 20 directly without requiring a separate fastening panel (not shown).

The paragraph on page 22 beginning at line 29, with changes at page 23, line 3:

D<sub>5</sub> Suitable bonding equipment which can be used to provide bonder 94 is well known to those skilled in the art. Desirably, the bonder is an ultrasonic bonder for improved efficiency and cost effectiveness. For example, as illustrated in Fig. 4, the bonder 94 may include the combination of one or more rotary ultrasonic horns 96 and an anvil roll 98 between which the webs to be bonded are passed to provide the bonds. Suitable rotary ultrasonic horns are described in U.S. Patent No. 5,110,403 to Ehler, the disclosure of which is hereby incorporated by reference. Such rotary ultrasonic horns 96 generally have a diameter of from about 5 to about 20 centimeters and a width of from about 2 to about 15 centimeters. Alternatively, the ultrasonic horn 96 may be a stationary ultrasonic horn as are also known to those skilled in the art (not shown). Other suitable ultrasonic horns and ultrasonic bonders are commercially available from Branson Sonic Power Company, a business having offices in Danbury, Connecticut. The bonder 94 could otherwise be a thermal or adhesive bonder as are known to those skilled in the art.

The paragraph on page 23 beginning at line 15, with changes at line 15:

D<sub>6</sub> As representatively illustrated in Fig. 4 the webs of interconnected side panels 86 with the primary fasteners 62 intermittently attached thereto may then pass through a cutter 100 and bonder 102 which cut the respective webs of interconnected side panels 86 into discrete panels and intermittently bond the discrete panels to the side edges of the web of interconnected absorbent chassis 80 at spaced apart locations. As illustrated in Figs. 3 and 4, a portion of each panel is permanently bonded to the side edges of the web of absorbent chassis 80 by bonder 102 to provide the permanent joint 76. In the illustrated embodiments the permanently bonded portions include that portion of the panel which will be located in the back waist region 24 of the diaper 20.

The paragraph on page 25 beginning at line 8, with changes at line 16:

D<sub>7</sub> As illustrated in Fig. 4, the waist regions 22 and 24 are maintained in the facing relationship by passing the diaper 20 through another bonder 114 which may be similar to bonders 94 and 102. The illustrated bonder 114 permanently bonds and secures the front and back panels 70 and 72 of each side panel 48 to each other along side seam 74 as illustrated in Figs. 1-3 to provide the pant-like diaper 20 of the present invention. Desirably, the bond pattern used along side seam 74 is continuous for improved strength. Alternatively, if one single piece of material is being used for each side panel 48, the free edges of the side panels 48 may be folded over and bonded by a bonder to the opposite side edge 30 of the absorbent chassis (not shown). Desirably, the bonder 114 is also an ultrasonic bonder for improved efficiency and cost effectiveness. Suitable bonders for permanently bonding and securing the panels together or to the absorbent chassis 28 are described above as being suitable for bonder 94. Suitable bond patterns are also described above.

The paragraph on page 26, beginning at line 10, with changes at lines 11, 12, 13, 15, 17, 18, and 19:

- D<sub>8</sub> 1. Tensile tester capable of obtaining a peak load and equipped with an appropriate load cell. A suitable tensile testing system is a SINTECH Tensile Tester, commercially available from MTS SINTECH, Research Triangle Park, North Carolina, under the trade designation INSTRON Model 4201 Tensile Tester with SINTECH QAD (Quality Assurance Department) Software.

2. Software commercially obtained from MTS SINTECH under the trade designation SINTECH TESTWORKS.
  3. Pneumatic-action grips commercially available from INSTRON Corporation, Canton, Massachusetts, under the trade designation "INSTRON Model 2712-004."
  4. 1 by 4 inch grip faces, serrated, commercially available from INSTRON Corporation, Canton, Massachusetts.
  5. Test facility having a temperature of  $23 \pm 1^{\circ}\text{C}$ , and a relative humidity of  $50 \pm 2$  percent.
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The paragraph on page 27 beginning at line 20, with changes at lines 21, 22, 23, 25, 27, 28, and 29:

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1. Tensile tester capable of obtaining a peak load and equipped with an appropriate load cell. A suitable tensile testing system is a SINTECH Tensile Tester, commercially available from MTS SINTECH, Research Triangle Park, North Carolina, under the trade designation INSTRON Model 4201 Tensile Tester with SINTECH QAD (Quality Assurance Department) Software.
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  5. Test facility having a temperature of  $23 \pm 1^{\circ}\text{C}$ , and a relative humidity of  $50 \pm 2$  percent.
-

# APPENDIX F

**Replacement Paragraphs to Specification with Markings to Show Changes Made:**

The paragraph on page 21 beginning at line 33, with changes at page 22, lines 8, and 12:

As illustrated in Fig. 4, a pair of laterally opposed side panels 48 having primary fasteners 62 attached thereto are also attached to the side edges of the continuously moving web of interconnected absorbent chassis 80. In such a configuration, the primary fasteners 62 may be refastenably engaged with the outer surface of the absorbent chassis 28 of each diaper. For example, as representatively illustrated in Figs. 1 and 2, the primary fasteners 62 located on the side margins 50 of each of the side panels 48 may be refastenably engaged with the outer surface 36 of the absorbent chassis 28 of the diaper 20 in the front waist region 22 of the diaper 20. Alternatively, the primary fasteners 62 located on the side margins 50 of each of the side panels 48 may be refastenably engaged with the outer surface 36 of the absorbent chassis 28 of the diaper 20 in the back waist region 24 (not shown). As discussed above, each diaper 20 may include an attachment panel 66 located on the outer cover 42 to which the primary fasteners 62 are refastenably engaged. Alternatively, the primary fasteners 62 may refastenably engage the outer cover 42 of the absorbent chassis 28 of the diaper 20 directly without requiring a separate fastening panel (not shown).

The paragraph on page 22 beginning at line 29, with changes at page 23, line 3:

Suitable bonding equipment which can be used to provide bonder 94 is well known to those skilled in the art. Desirably, the bonder is an ultrasonic bonder for improved efficiency and cost effectiveness. For example, as illustrated in Fig. 4, the bonder 94 may include the combination of one or more rotary ultrasonic horns 96 and an anvil roll 98 between which the webs to be bonded are passed to provide the bonds. Suitable rotary ultrasonic horns are described in U.S. Patent No. 5,110,403 to Ehlert, the disclosure of which is hereby incorporated by reference. Such rotary ultrasonic horns 96 generally have a diameter of from about 5 to about 20 centimeters and a width of from about 2 to about 15 centimeters. Alternatively, the ultrasonic horn 96 may be a stationary ultrasonic horn as are also known to those skilled in the art (not shown). Other suitable ultrasonic horns and ultrasonic bonders are commercially available from Branson Sonic Power Company, a business having offices in Danbury, Connecticut. The bonder 94 could otherwise be a thermal or adhesive bonder as are known to those skilled in the art.



The paragraph on page 23 beginning at line 15, with changes at line 15:

As representatively illustrated in Fig. 4 [The] the webs of interconnected side panels 86 with the primary fasteners 62 intermittently attached thereto may then pass through a cutter 100 and bonder 102 which cut the respective webs of interconnected side panels 86 into discrete panels and intermittently bond the discrete panels to the side edges of the web of interconnected absorbent chassis 80 at spaced apart locations. As illustrated in Figs. 3 and 4, a portion of each panel is permanently bonded to the side edges of the web of absorbent chassis 80 by bonder 102 to provide the permanent joint 76. In the illustrated embodiments the permanently bonded portions include that portion of the panel which will be located in the back waist region 24 of the diaper 20.

The paragraph on page 25 beginning at line 8, with changes at line 16:

As illustrated in Fig. 4, the waist regions 22 and 24 are maintained in the facing relationship by passing the diaper 20 through another bonder 114 which may be similar to bonders 94 and 102. The illustrated bonder 114 permanently bonds and secures the front and back panels 70 and 72 of each side panel 48 to each other along side seam 74 as illustrated in Figs. 1-3 to provide the pant-like diaper 20 of the present invention. Desirably, the bond pattern used along side seam 74 is continuous for improved strength. Alternatively, if one single piece of material is being used for each side panel 48, the free edges of the side panels 48 may be folded over and bonded by a bonder to the opposite side edge 30 of the absorbent chassis (not shown). Desirably, the bonder 114 is also an ultrasonic bonder for improved efficiency and cost effectiveness. Suitable bonders for permanently bonding and securing the panels together or to the absorbent chassis 28 are described above as being suitable for bonder 94. Suitable bond patterns are also described above.

The paragraph on page 26, beginning at line 10, with changes at lines 11, 12, 13, 15, 17, 18, and 19:

1. Tensile tester capable of obtaining a peak load and equipped with an appropriate load cell. A suitable tensile testing system is a SINTECH Tensile Tester, commercially available from MTS SINTECH, Research Triangle Park, North Carolina, under the trade designation INSTRON Model 4201 Tensile Tester with SINTECH QAD (Quality Assurance Department) Software.

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3. Pneumatic-action grips commercially available from INSTRON Corporation, Canton, Massachusetts, under the trade designation "INSTRON Model 2712-004."

4. 1 by 4 inch grip faces, serrated, commercially available from INSTRON Corporation, Canton, Massachusetts.

5. Test facility having a temperature of  $23 \pm 1^{\circ}\text{C}$ , and a relative humidity of  $50 \pm 2$  percent.

The paragraph on page 27 beginning at line 20, with changes at lines 21, 22, 23, 25, 27, 28, and 29:

1. Tensile tester capable of obtaining a peak load and equipped with an appropriate load cell. A suitable tensile testing system is a SINTECH Tensile Tester, commercially available from MTS SINTECH, Research Triangle Park, North Carolina, under the trade designation INSTRON Model 4201 Tensile Tester with SINTECH QAD (Quality Assurance Department) Software.

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3. Pneumatic-action grips commercially available from INSTRON Corporation, Canton, Massachusetts, under the trade designation "INSTRON Model 2712-004."

4. 1 by 4 inch grip faces, serrated, commercially available from INSTRON Corporation, Canton, Massachusetts.

5. Test facility having a temperature of  $23 \pm 1^{\circ}\text{C}$ , and a relative humidity of  $50 \pm 2$  percent.

# APPENDIX G

Abstract

D3 A prefastened, pant-like, refastenable, disposable absorbent article and methods of making the same is disclosed. The pant-like disposable absorbent article includes an absorbent chassis and a pair of elastic front and back panels. The absorbent chassis defines a pair of laterally opposed side edges and a pair of longitudinally opposed waist edges. The opposed back panels are respectively permanently attached to each of the side edges of the absorbent chassis in the back waist region of the absorbent article to provide a permanent joint. The opposed front panels are respectively refastenably attached to each of the side edges of the absorbent chassis in the front waist region of the absorbent article to provide a refastenable joint. The front and back side panels are permanently connected together along a side seam to define a waist opening and a pair of leg openings in the pant-like disposable absorbent article. In use, the pant-like, prefastened, refastenable, disposable absorbent article can function in a similar manner to conventional training pants when in the prefastened configuration, or they can be unfastened prior to or during use to function in a refastenable manner similar to conventional diapers.

# APPENDIX H



Version of Amended Abstract with Markings to Show Changes:

Abstract

A prefastened, pant-like, refastenable, disposable absorbent article and methods of making the same is disclosed. The pant-like disposable absorbent article includes an absorbent chassis and a pair of elastic front and back panels. The absorbent chassis defines a pair of laterally opposed side edges and a pair of longitudinally opposed waist edges. The opposed back panels are respectively permanently attached to each of the side edges of the absorbent chassis in the back waist region of the absorbent article to provide a permanent joint. The opposed front panels are respectively refastenably attached to each of the side edges of the absorbent chassis in the front waist region of the absorbent article to provide a refastenable joint. The front and back side panels are permanently connected together along a side seam to define a waist opening and a pair of leg openings in the pant-like disposable absorbent article. In use, the pant-like, prefastened, refastenable, disposable absorbent article can function in a similar manner to conventional training pants when in the prefastened configuration, or they can be unfastened prior to or during use to function in a refastenable manner similar to conventional diapers.

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